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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,055	02/19/2002	Seung-Hwan Moon	6192.0234.AA	8407
7590	06/22/2005		EXAMINER	
McGuire Woods Suite 1800 1750 Tysons Boulevard McLean, VA 22102-4215			LAO, LUN YI	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/077,055	MOON, SEUNG-HWAN	
	Examiner	Art Unit	
	Lao Y Lun	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12, 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui(5,754,150) in view of Kastan et al(5,109,219).

Matsui teach an LCD display having a variable resistor, wherein the variable resistor automatically varies voltage application being a function of variation viewing angle(luminance)(see figures 2-4, 8, 11, 12; abstract; column 2, lines 34-54; column 4, lines 56-65 and column 10, lines 7-53) and a liquid crystal gamma curve corresponding to the viewing angle(see figures 3, 12; column 2, lines 34-54; column 10, lines 4-68 and column 11, lines 1-6).

Matsui fails to disclose a notebook computer.

Kastan et al teach an LCD used in a notebook computer(see column 1, lines 14-30). It would have been obvious to have modified Matsui with the teaching of

Art Unit: 2673

Kastan et al, since the LCD display having be reduced in the depth weight and power dissipation comparing to a CRT display.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui(5,754,150) in view of Kastan et al(5,109,219) and Ferrel et al(6,628,255).

Matsui as modified fail to disclose the variable resistor for changing the viewing angle of a display mounted on a hinge of the LCD display.

Ferrel et al teach a resistor for varying the viewing angle of an LCD display mounted on a hinge of the LCD display(see figure 1; column 1, lines 61-68 and column 2, lines 1-7). It would have been obvious to have modified Matsui as modified with the teaching of Ferrel et al, so as to provide more convenience for a user to adjust the view angle by a user's thumb when a user holding a computer.

#### ***Allowable Subject Matter***

4. Claims 1-12 and 15-16 are allowable.

Claims 1-7 are allowable since none of cited references teach an LCD display a voltage divider converting a level of the second voltage based on a viewing angle of an LCD display panel to generate a third voltage and a viewing angle information generator receiving the first voltage and third voltage and generating viewing angle information(see figure 3, with all other limitations cited in claims 1 and 6.

Claims 10-12 are allowable since none of cited reference teach an LCD display for feeding analog driving voltage having the lower level(VF) back to a second input terminal of the driving voltage generator(100)(see figure 8).

### ***Response to Arguments***

5. Applicant's arguments filed on March 18, 2005 have been fully considered but they are not persuasive.

Applicant argues that Matsui does not teach the variable resistor automatic varies a voltage applied to the liquid crystal in response to variation of a view angle on page 9. The examiner disagrees with that since Matsui teach when the variable resistor automatic varies a voltage(common voltage) applied to the liquid crystal in response to a variation of a view angle; e.g. when a user wants to change a view angle(luminance), a user could changing a variable resistor by manually adjusting a dial(see figures 2-4, 8-12; abstract; column 2, lines 36-55; column 10, lines 5-26 and column 11, lines 1-6).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2673

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

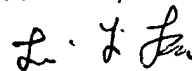
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/077,055

Page 6

Art Unit: 2673

June 17, 2005

A handwritten signature in black ink, appearing to read 'Lun-yi Lao'.

**Lun-yi Lao**  
**Primary Examiner**